

ABSTRACT

A balun in which the phase shift may be reduced significantly is disclosed. The balun has three lines, i.e. a first line b, a second line a and a third line c, arranged in parallel with the ground surface. The second line a and the third line c are arranged at the same height from the ground surface GC, the longitudinal length of each respective one of the first line b, second line a and third line c are specified to be equal to a quarter ($1/4$) of the wavelength at the central frequency in the working band, and the capacitance C_a between the second line a and the ground surface GC is specified to be equal to the capacitance C_{ab} between the second line a and the first line b. Furthermore, the distance h_3 between the center of each respective one of the second line a and third line c in the height direction and the ground surface GC located closer to each respective one of the second line a and third line c is specified to be longer than the distance h_2 between the center of the first line b in the height direction and the center of each respective one of the second line a and third line c in the height direction, or the permittivity of a dielectric D_3 is specified to be less than that of a dielectric D_2 .